

ABSTRACT

A light-emitting diode (LED) encapsulation material and manufacturing process comprising a photo-sensitive polymer constituting at least one of an Oligomer or a reactive Monomer, and a 5 Photoinitiator. After a LED chip encapsulation, the photo-sensitive polymer is exposed to visible light or ultraviolet light, or electron beam, free of infrared rays, thereby triggering a free radical polymerization reaction of the photo-sensitive polymer, and rapid curing thereof under room temperature, eliminating the need for heating in a furnace during 10 encapsulation manufacturing process of the light-emitting diode, while prompting rapid curing thereof, and thereby enhancing production efficiency.